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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Risto Pekka Antero Nokelainen
Serial No.	:	09/935,917
Conf. No.	:	2006
Filed	:	August 23, 2001
For	:	PERFORATION DEVICE
Examiner	:	Kenneth E. Peterson
Art Unit	:	3724

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Sir:

Transmitted herewith is/are the following document(s):

[X] Appellant's Reply Brief Pursuant To 37 C.F.R. §1.193 (in triplicate)
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Attorney Docket No.: B1009.70004US00
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REPLY BRIEF
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REPLY BRIEF

This Reply Brief is being submitted in response to the Examiners' Answer (Answer) filed in this case on November 22, 2005.

The Answer, in Section 10 (Grounds of Rejection; pages 3-6) and in Section 11 (Responses to Argument; pages 6-9), makes two primary rejections. The first rejection, mentioned briefly in the Notice of Non-compliance mailed on December 28, 2004, and expanded upon for the first time in the Answer, is that claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,334,126 (Moll) in view of U.S. Patent No. 4,721,058 (Hayamizu). The second rejection is that claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 are unpatentable under 35 U.S.C. § 103(a) over Hayamizu in view of Moll.

Appellants respectfully traverse both of these rejections.

I. Moll in View of Hayamizu

A. Modifying Moll In View of Hayamizu is Improper

As set forth in the Revised Appellant Brief, there would be no motivation to one of skill in the art to modify the perforating device of Moll to include barcodes and a reader.

The Answer contends that:

> "It would have been obvious to one of ordinary skill in the art to have modified Moll by adding a barcode reader (and requiring that all sheets have barcodes on them), as taught by Hiyamizu [sic], in order to automate a process or setting when the perforating wheel is activated, thus reducing the work of the operator." (page 5, lines 6-9).

Further, the Answer states that Appellant's position against such combination includes:

> "Argument #1 - Because Hayamizu, [sic] is directed to paper cutting, not paper perforating . . .
> Argument #2 - Because Moll is already automated for perforating large batches of identically perforated sheets." (page 6, line 19 - page 7, line 5)

The Answer has misrepresented Appellant's arguments by paraphrasing them in such simple terms (a pattern repeated throughout the Answer) that it obfuscates critical points of Applicant's position. This Reply Brief, in addition to responding to new points made in the Answer, also clarifies any confusion in Appellant's position that may have resulted from the misrepresentations in the Answer.

Moll is directed to a perforating device for use with a paper folding machine or other paper processing machine for mailing multi-part pieces of paper, from which a portion of the piece of paper can be detached and returned, for example, to place an order for a product, obtain a catalog, reply to a survey, or other uses (col. 1, lines 16-19; col 2, lines 31-33). As noted in the Revised Appellant Brief, the perforating device of Moll is well-suited for perforating a batch of sheets of paper in identical fashion, according to pre-set values of switches. Contrary to assertions in the Answer (page 4, lines 21-22), these switches are not used by an operator to input information *specific to each sheet*, but rather, to input information common to all sheets that pass through the perforating device.

There is no motivation or suggestion in Moll itself to modify the perforating device in Moll to select sheets from a group of sheets for perforation as the group is moving through the perforating device or to receive a signal based on information specific to an individual sheet of paper as the group is passing through the perforating device. The Answer pointed to no statement in Moll to this effect because there is none. There is simply no need for these modifications for Moll to carry out its primary function of identically perforating batches of paper for mailings.

The Answer contends that the motivation to modify Moll in this manner can be found in Hayamizu because:

> "paper cutting and paper perforating are closely related fields of endeavor, based not only on having the same end effect, but also based on largely similar machinery" (page 6, line 21 - page 7, line 3) and
>
> "Hiyamizu [sic] teaches a better, more flexible and less operator intensive way to automate that can achieve everything Moll does and more. Modifying Moll with Hiyamizu's [sic] teachings would not in any decrease Moll's capabilities." (page 7, lines 7-10).

Firstly, the paper cutting device of Hayamizu and the paper-perforating device of Moll are not from closely related fields of endeavor. The paper cutting device of Hayamizu is used for an automatic drawing machine using continuous roll-type drawing paper. (Col. 1, lines 59-60). This is a completely different field of endeavor from the perforating device of Moll, which is used in conjunction with a folding machine for mailing partitioned pieces of paper, and which uses individual sheets of paper. One of skill in the art would not have looked to the disparate system of Hayamizu to modify the system of Moll. What is more, the systems of Hayamizu and Moll do not have the same end effect. The cutting device of Hayamizu produces sheets of drawings cut to a varying sizes from a continuous roll, whereas the perforating device of Moll produces identical, uniformly-sized pieces of paper with multiple portions delimited by perforations.

Further, the additional flexibility that Hayamizu allegedly provides would be superfluous to the operation for Moll is designed. One of skill in the art would not have been motivated to modify the relatively simple system of Moll to incorporate the complexity of reading bar codes, when information specific to each sheet of paper is not necessary for processing batches of

identical mailings, etc.. Moreover, in Hayamizu, the bar codes for the drawings reside in areas on the roll-type drawing paper that are outside of the drawing-carrying regions in which the drawings reside (col. 3, lines 47-51; Fig. 2), and thus are removed from the roll by the cutting operations, resulting in drawings without barcodes on them. With the individual sheets of Moll, the bar codes would have to reside on the pieces of paper themselves, as there is no extra space to put them as with roll-type drawing paper. Thus, the sheets output by the Moll system would include barcodes on them, which may be an undesired result of using bar codes, especially when they are not necessary for batch processing of identically perforated pieces of paper.

B. Claims 11, 14, 15, 17, 22, 23 and 37 (Group I) Patentably Distinguish Over Moll in View of Hayamizu

Even if Hayamizu and Moll were combined, the resulting combination would not teach all the limitations recited in claim 14. Specifically, the combination would not teach or suggest a method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device that includes a first perforating tool, the method comprising, *inter alia*, positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated. As set forth in the Revised Appellant Brief, Moll discloses presetting values for a perforator before receiving any sheet of paper, such that all sheets are perforated (and are perforated the same way), not just selected sheets. Further, Hayamizu does not teach or suggest selecting sheets to be cut as the sheets move through the paper cutting means, including positioning the X-axis lengthwise cutter in either a position to cut paper or a position to allow paper to pass uncut. Rather, Hayamizu discloses that a lengthwise and widthwise cut is made for each drawing on the roll of paper. Thus, in Hayamizu, drawings are not selectively cut, but each drawing is automatically cut several times. In addition, even if the Examiner's interpretation of the term "sheet" were adopted, each and every roll of paper would be cut, not just selected rolls as required by claim 14. Thus, there is no teaching at all in either Moll or Hayamizu of selectively perforating sheets. Thus, the combination of Hayamizu and Moll would not teach or suggest perforating only selected sheets, and not all sheets. Rather, such combination would teach just the opposite–automatically perforating each sheet of paper.

The Answer contends that:

> "Appellant argues (pages 11, 14, and 16) that neither Hiyamizu [sic] nor Moll state anything about letting a sheet go by uncut or unperforated. This is a ridiculous supposition on behalf of the Appellant. Is Appellant suggesting that if one of Hiyamizu's [sic] drawings were as wide as the sheet, the bar code would go ahead and indicate that the drawing should be cut down the middle anyway?"

The Answer has again misstated, and apparently misunderstood, Appellant's position in this regard. A basic premise of the Examiner's argument throughout the latter stages of prosecution, including Appeal, is that a roll of paper as described in Hayamizu is a "sheet" of paper as this term is used in the claims. Under this understanding, Hayamizu does not teach or suggest allowing a sheet to go by uncut or unperforated; i.e., Hayamizu does not disclose or suggest letting an entire roll of paper go by uncut or unperforated. It is not necessary in responding to the Examiner's argument to address whether a bar code would indicate whether a drawing should be cut down the middle as suggested in the Answer. Nor did Appellant state or in any way insinuate this "ridiculous" argument. However, since the Answer has raised this issue, it suffices to point out that there is no teaching or suggestion in Hayamizu that a drawing region on a roll of paper would ever pass uncut. Rather, Hayamizu teaches the very opposite, that a cut in the X-axis lengthwise direction is made for each drawing region ("when these signals 7 are input into a paper cutting control unit 12 through a bar code reader 11, a motor driver 18 is controlled thereby, . . . to carry out a rotational movement of a circumferentially-grooved rotary body (drag roller) 81 which is adapted to cut the paper 5 continuously in the X-axis direction . . ."; col. 3, lines 30-42). Hayamizu does not disclose why a cut is made for every drawing region, but it could be done for any number of reasons such as, for example, to remove imperfections along the edges of every drawing region (e.g., imperfections resulting from the storage and/or feeding of the paper), to remove hole-punched edges that are used to feed the paper into the cutting device, to remove margins, etc.

C. Claims 1, 2, 35 and 36 (Group II) Patentably Distinguish Over Moll in View of Hayamizu

Even if Moll and Hayamizu were combined, the resulting combination would not teach all the limitations recited in claim 1. Specifically, for reasons that should be clear from the Revised Appellant Brief and Section I.B. above, the combination of Hayamizu and Moll would not teach or suggest a perforator for selectively perforating sheets of paper of a group of sheets in

which the sheets are selected as the group is moving through the perforator, the perforator comprising an electronic control apparatus configured such that, if perforation is not desired for a sheet, the electronic control apparatus does not emit a signal to a perforating tool, as required by claim 1.

D. Claims 27, 28, 30 and 38 (Group III) Patentably Distinguish Over Moll in View of Hayamizu

Even if Moll and Hayamizu were combined, the resulting combination would not teach all the limitations recited in claim 27. Specifically, for reasons that should be clear from the Revised Appellant Brief and Section I.B. above, the combination of Hayamizu and Moll would not teach or suggest a perforator for selectively perforating sheets of paper of a group of sheets in which the sheets are selected as the group is moving through the perforator, as required by claim 27.

II. Hayamizu in View of Moll

A. Modifying Hayamizu in View of Moll is Improper

As set forth in the Revised Appellant Brief, modifying the cutting blade of Hayamizu to perforate as taught by Moll would render Hayamizu unsatisfactory for its intended purpose, which is to remove blank portions of cut drawing paper to increase the operating efficiency of a high-output drawing machine. Modifying the system of Hayamizu to perforate instead of cut paper would result in a system that requires the very step of a user (operator) removing blank portions of paper (i.e., "disassembling") that Hayamizu seeks to eliminate. The Answer contends that this argument:

> "[Is] not true, since separating the drawing from the waste paper at the machine (via slitting) or having the end user separate the drawing from the waste (via tearing along the perforated lines) yields the same results (same intended purpose), namely a drawing on an appropriate size of paper."
> (page 6, lines 7-11).

However, these two techniques do not yield the same results. Firstly, a drawing on an appropriately sized of paper would not be the resulting output of Hayamizu's system if modified to use a perforating blade as opposed to a cutting blade. Rather, the system would output pieces

of perforated paper of an inappropriate, uniform size. The fact that an end user later could remove the wasted space by tearing along a perforated line is irrelevant, as this would not be the output of the system itself if so modified.

Furthermore, removing blank portions of paper using a cutter yields paper that has a sharp, smooth edge. In contrast, perforating drawing paper, and then tearing along the perforated line will result in paper having a jagged edge, which is a materially different result that is unacceptable for many applications. Thus, the results are not the same.

The Answer further contends that:

> "Appellant states that 'cutting blades and perforating blades have entirely different purposes.' This is quite an exaggeration. While an operator would be inclined to use a slitting blade in some situations and perforating blade in other situations, the end effect (after tearing along the perforated line) is the same."

Preliminarily, the Answer has misquoted the Revised Appellant Brief. Contrary to what the Answer indicates by use of quotation marks, the Revised Appellant Brief never states that "cutting blades and perforated blades have entirely different purposes." Nonetheless, it is not an exaggeration to say that cutting blades and perforating blades serve entirely different purposes. As conceded in the Answer, slitting blades are used in some situations and perforating blades are used in different situations. However, contrary to the assertions of the Answer, the end effect is not the same for the reasons made clear above. Perforating blades are typically used in paper folding or paper processing machines to produce articles for mailing (e.g. advertisements, bills, order forms, subscriptions, surveys, etc.), so that a portion of the article can be detached and returned to the sender. (see Moll; col. 1, lines 7-10; lines 15-19). Cutting blades would be inappropriate for this purpose. Rather, cutting blades are used to produce paper that has smooth, sharp edges, for example, for a high-output drawing machine like that described in Hayamizu. Thus, cutting blades and perforating blades do indeed serve entirely different purposes.

Further, if replacing cutting blades with perforating blades in an apparatus like that of Hayamizu is well known to those of skill in the art, as contended by the Answer, then presumably such knowledge could be found in Hayamizu. However, Hayamizu is silent regarding the use of perforating blades—and for good reason. The use of perforating blades in Hayamizu would defeat the purpose for which the cutting blades are used—to remove unused

portions of paper before reaching the end user and to leave a sharp, clean edge. Thus, using a perforating blade in Hayamizu would render the system unsatisfactory for its intended purpose.

B. Claims 11, 14, 15, 17, 22, 23 and 37 (Group I) Patentably Distinguish Over Hayamizu in View of Moll

Even if Hayamizu and Moll were combined, the resulting combination would not teach all the limitations recited in claim 14, for at least the reasons set forth in the Revised Appellant Brief and in Section I.B. above.

The Answer also provides an alternative reading of Hayamizu (page 8), in which the X-axis lengthwise cutter (84, 88,90) receives a plurality of individual sheets output from Y-axis widthwise (transverse) cutter 69. On page 9 of the Revised Appellant Brief, Appellant explained why the perforating device and the first perforating tool of claim 14 would not read on Hayamizu under this interpretation (assuming *arguendo* that Hayamizu actually taught to perforate rather than cut). Appellants understood the Examiner's position to be that the X-axis lengthwise cutter was the perforating tool, as opposed to the perforating device. Under this interpretation, the perforating device would have to be the paper cutting system 9, which does not receive a plurality of sheets as required by the perforating device of claim 14, but rather receives a continuous roll of paper.

In response to Appellant's explanation, the Answer stated:

> "Appellant notes the phrase 'successively receiving a plurality of sheets of paper as input to the perforating device' found in claims 14 and 27 and 'sheets to be perforated are selected as the group is moving successively through the perforator' found in claims 1, 14 and 27 and wonders exactly what parts of Hiyamizu [sic] constitute 'the perforating device.' The answer is that the perforating device is the slitter (84, 88, 90) modified to be a perforator by Moll."

The Answer has again misstated Appellant's position, and now contends that the X-axis cutter is the perforating device, not the perforating tool.

Claim 14 recites, *inter alia*:

> "the **perforating device** including a first **perforating tool** for perforating sheets of paper **and a control unit** for controlling the perforating tool . . . the method comprising acts of: successively receiving a plurality of sheets of paper as input to the **perforating device**; and positioning the first **perforating tool** in either a perforating position to perforate paper or a neutral position to allow paper to pass unperforated."

If the X-axis cutter is the perforating device, then the X-axis cutter does not include a perforating tool, nor a control unit, as required by claim 14. Thus, regardless of whether the X-axis cutter is interpreted to be the perforating device or the perforating tool, claim 14 patentably distinguishes over the combination of Hayamizu and Moll by the recitation of a perforating device and a perforating tool.

C. Claims 1, 2, 35 and 36 (Group II) Patentably Distinguish Over Hayamizu in View of Moll

Even if Hayamizu and Moll were combined, the resulting combination would not teach all the limitations recited in claim 1, for at least the reasons set forth in the Revised Appellant Brief and reasons discussed above in Section I.B.

D. Claims 27, 28, 30 and 38 (Group III) Patentably Distinguish Over Hayamizu in View of Moll

Even if Hayamizu and Moll were combined, the resulting combination would not teach all the limitations recited in claim 27, for at least the reasons set forth in the Revised Appellant Brief and reasons discussed above in Section I.B.

Further, for reasons that should be clear from the discussion in Section II.B regarding the alternative interpretation of Hayamizu set forth in the Answer, regardless of whether the contention is that the X-axis cutter correlates to the perforating device or the perforating tool recited in claim 27, the combination of Hayamizu and Moll does not disclose or suggest "the **perforating device** including a first **perforating tool** for perforating sheets of paper **and a control unit** for controlling the perforating tool . . . the system comprising: means for successively receiving a plurality of sheets of paper as input to the **perforating device**; and means for positioning the first **perforating tool** in either a perforating position to perforate paper or a neutral position to allow paper to pass unperforated," recited in claim 27.

III. Conclusion

Appellant respectfully requests that the Board of Appeals reverse the Examiner's rejections under 35 U.S.C. §103(a) of the claims of Group I: claims 11, 14, 15, 17, 22, 23, and 37, the claims of Group II: claims 1, 2, 35 and 36, and the claims of Group III: claims 27, 28, 30 and 38. The Examiner has not made out a prima facie basis for rejecting the claims and the claims are allowable over the prior art of record. It is requested that a Notice of Allowance be granted in this case.

Respectfully submitted,

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